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Remarks/Arguments

Claims 38, and 41 to 46 have been withdrawn in view of the restriction requirement.

In the specification, the paragraph beginning at page 4, lines 31 and ending at page 5, line 2 has been amended to be consistent with the newly amended claim 30

The Examiner rejected claims 1 and 2 under 35 U.S.C. 102(b) as being anticipated by Khor et al. (U.S. patent no. 6,025,479). Referring to col. 3, lines 10 - 65, the Examiner has indicated that Khor discloses "the instant process of preparing a chitin film by coagulating a chitin solution to form a gel (col. 3, line 15), the chitin having been dissolved in a solvent (col. 3, lines 10-11), pressing the chitin gel to form a film and removing residual solvent under press (col. 3, lines 46-51, the pressing being done by the weighted glass plate) and washing the chitin film (col. 3, lines 62)."

The Examiner has also rejected claims 3 to 29 under 35 U.S.C. 103(a) in view of Khor et al indicating that the particulars of the method defined in these claims would have been within the skill level of the art.

With respect, the Examiner has misunderstood Khor et al. This reference is directed to preparing a reversible water swellable gel from chitin by chemically treating chitin in the dry form to produce the gel. Khor does not teach either the use of weighted glass plates to press a chitin gel to form a film, or the removal of a residual solvent under press, as indicated by the Examiner. Rather, Khor teaches forming a chitin gel which is dehydrated and dried to form a final dry form of chitin (see column 3, lines 44-46). Khor discloses that weighted glass plates may then be used to obtain flat samples of the final dry form of chitin (see column 3, lines 46 to 56).

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The method as claimed in the present application includes the steps of pressing the chitin gel (wet) to form a chitin film and removing residual solvent from the chitin film under press and, as described in the specification, results in a flexible chitin film.

Khor does not disclose or at all suggest pressing a chitin gel to form a flexible chitin film. In fact, Khor introduces water during formation of the film (see column 3, lines 25 – 30) and results in brittle films. The introduction of water in the film forming process is the primary culprit in giving rise to brittle films and Khor's method does not result in a flexible film. Since Khor is directed to modifying the dry chitin film by chemical treatment to achieve the desired characteristics, Khor provides no motivation whatsoever to press chitin gel so as to form a chitin film of desired characteristics. Therefore, it is respectfully submitted that the cited reference does not anticipate or render obvious any of claims 1 to 29.

The Examiner has rejected claims 30 and 31 under 35 U.S.C. 102(a) and claims 32 to 36 under 35 U.S.C. 103(a) in view of Schoenfeldt et al. Referring to Column 4, lines 7-19 and 54-67; column 5, line 60, the Examiner has indicated that this reference "discloses the instant process wherein two polymeric solutions ("chitin/chitosan or derivatives thereof". col. 5, line 60) are mixed together and crosslink to form a gel matrix precursor, the solvent subsequently removed (i.e., isolated) and the matrix precursor dried to yield the absorbent matrix".

The Schoenfeldt reference is directed to a method of producing a highly cohesive material that is swellable but not soluble in water (see column 3, lines 12 to 18) and which may be used as a dressing or an absorbent article, for example disposable diaper (see column 7, lines 12 to 29). Schoenfeldt et al discloses mixing aqueous solutions of oppositely charged hydrophilic polymers to form a gel dispersion (see column 3, lines 53- 60. Column 4, lines 7

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to 23, lines 54-65). As a result of ionic crosslinking between the oppositely charged polymers, the polymers which are otherwise soluble in water, interact to form a gel dispersion.

In the present method, an absorbent matrix that may be used in the preparation of a chitin film is formed as a result of mixing polymer solutions in which the polymer in one solution is insoluble in the other solution. For example, chitin is insoluble in water such that when a chitin solution is mixed with an aqueous solution of carboxymethyl (CM) chitin, chitin precipitates out of the solution and entraps CM-chitin to form a colloidal suspension (see page 11, line 32 to page 12 line 12 and Example 6)

Claims 30 and 31 have been amended to more clearly define the invention and as amended are clearly distinguishable from Shoenfeldt. More particularly, Shoenfeldt discloses mixing aqueous hydrophilic polymer solutions and since each polymer is hydrophilic, it will not be insoluble in the solution with which it is mixed as in the present invention. Moreover, while the Examiner has noted reference to "chitin/chitosan or derivatives thereof" in column 5, lines 60, chitin and chitosan are insoluble in water and are therefore not hydrophilic. As Shoenfeldt is directed to methods employing hydrophilic polymers, this reference would be understood to describe hydrophilic derivatives of chitin/chitosan that may be prepared as described in column 4, lines 7 to 19. Since crosslinking between hydrophilic polymers is key to achieving a cohesive and non-disintegrating end product (see column 5, lines 19 to 32), Shoenfeldt provides no motivation to a skilled person, and in fact teaches away from using polymers which are not hydrophilic or which may otherwise be insoluble in the aqueous solution with which it is mixed to create the type of matrix precursor that may be used in the preparation of a chitin film

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For at least these reasons, claims 30 and 31 as amended and claims 32 to 26 that depend therefrom are patentable over Schoenfeldt.

The Examiner has rejected claims 37, 39 and 40 under 35 U.S.C 103(a) as unpatentable over Khor in view of Schoenfeldt. For the reasons discussed above, these claims are not rendered obvious by the cited references alone or in combination. Moreover, the Examiner has not identified any motivation to combine the cited references. To the contrary, Khor is directed to preparing a chitin film that is swellable by chemical treatment of dry chitin film and does not contemplate achieving this characteristic by incorporating an absorbent matrix during formation of the hydrogel form of chitin. Schoenfeldt in any event is directed to preparing materials suitable for use as the finished article such as dressing. As a result, Khor provides no motivation for a skilled person to modify the method of Khor by incorporating any absorbent matrix during hydrogel formation, let alone the type of end product taught in Schoenfeldt.

New claim 47, dependent on claim 31 has been added to further specify the invention and is supported at least by page 11, lines 32-33 and Example 6.

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In view of the above, Applicant respectfully requests early favourable reconsideration and allowance of this application.

Respectfully submitted,



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